

## Patient information factsheet

# Double vision and Fresnel prisms

We have given you this factsheet because you have been diagnosed with double vision. It explains what double vision is and how it can be helped using Fresnel prisms. We hope it helps to answer some of the questions you may have. If you have any further questions or concerns, please contact us using the details at the end of this factsheet.

### What is double vision?

Double vision (also known as diplopia) is when you look at one object but can see two images. You may see the images as one above the other, side by side, or a combination of both. You may see the images as very close together (sometimes overlapping) or there may be a big gap between the images.

You may experience double vision all the time or it may come and go. For some people, it may only happen when they are looking in a particular direction.

There are two types of double vision:

### Binocular (both eyes)

Binocular double vision is caused by your two eyes not working together properly. This may be due to you having an eye condition, such as a squint, or an eye movement problem that causes your eyes to look in different directions, so you may see one image with each eye that are in different places, giving double vision. This type of double vision goes away when either one of your eyes is closed.

### Monocular (one eye)

Monocular double vision is when you have double vision in only one of your eyes. Double vision that affects only one eye is usually linked to other eye conditions, such as dry eyes (where the eyes do not produce enough tears) or cataracts (clouding of the lens in the eye). This type of double vision does not go away when the unaffected eye is covered. It is usually treated by treating the underlying eye condition.

The rest of this factsheet will look at binocular double vision.

### How is binocular double vision treated?

Binocular double vision can be treated in a number of ways.

- **Prisms** - These are special lenses that help join the two images together. Prisms can be given as Fresnel prisms (a thin sheet of prisms) which an orthoptist (a healthcare professional specialising in diagnosing and treating defects in eye movement) applies to one lens of your glasses or they can be built into new glasses.
- **Covering one eye** - Prisms do not work for everyone. Some people find covering one eye (for example, with a patch) to block out the second image works well.

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- **Eye exercises** - Eye exercises can help some cases of double vision.
- **Eye muscle surgery or botulinum toxin injections** - In some cases, surgery or botulinum toxin injections can help with the squint or eye muscle problem that is causing the double vision. However, these options are only suitable once we know what is causing the double vision and the condition is stable.

This factsheet will focus on Fresnel prisms as a treatment for double vision. If you need more information about the other treatment options, please ask your orthoptist or read our 'Squint in adults' factsheet (see 'Useful links' section on page 3).

## What is a Fresnel prism?

Prisms are special lenses, which we use to help double vision. A Fresnel prism is a thin, plastic sheet consisting of a row of small prisms. It can be cut to size and applied to the surface of one lens of your glasses.

Fresnel prisms come in a range of different strengths. Your orthoptist will assess your eyes to decide which strength is right for you. The prism should give you single vision when looking straight ahead, but you may still have some double vision when you look away from the centre. Moving your head rather than your eyes when looking around may help to reduce the double vision.

## Why do I need a Fresnel prism?

Fresnel prisms are usually the best option to help double vision when it first starts. This is because we can fit them onto your glasses quickly and easily and we can change them easily if your vision changes, without needing to change your glasses.

The prism can correct your double vision while you are wearing it, but it cannot cure your double vision. You will still have double vision when you are not using the prism.

## How do I look after the prism?

You can use a nailbrush or toothbrush to clean the prism.

1. Mix some liquid soap into some warm water.
2. Dip the brush into the water, then gently brush the prism in line with the lines on the prism.
3. Gently rinse the soapy water off and pat the prism dry with a cloth or tissue.
4. Hold the prism in place on your glasses while you are cleaning it, so that it does not fall off.

If the prism falls off your glasses, you can put it back on by pouring a little water onto the surface of the lens of your glasses, and then pressing the prism back onto the lens with the smooth side against the glass. The prism is cut so that it will only fit on one direction. Refitting the prism can be fiddly. If you have any difficulty in doing this, contact your orthoptist who will be able to help.

## What should I do if the prism is not helping the double vision?

You may need to wear a different strength prism if your eyes change. In some cases, the double vision may get better so that you do not have double vision without the prism but start to get double vision with the prism. If this happens, you can remove the prism from your glasses. You should contact your orthoptist if anything changes with your vision.

## Are there any risks or side effects?

The lines on the Fresnel prism may make your vision blurred, and can cause some dazzle and distortion. Usually, these problems are only noticeable when we first put the prism on your glasses and should settle after a few days.

## How long will I have to wear the Fresnel prism?

How long you will have to wear the Fresnel prism will depend on what is causing your double vision. Some double vision gets better over time so that you can eventually stop using the Fresnel prism. However, a small number of people will need to continue using the Fresnel prism for the long term. Some people go on to have a permanent prism built into the lenses of their glasses instead of the Fresnel prism.

In some cases, we can perform an operation on the eye muscles or give a botulinum toxin injection into the eye muscle to correct the double vision instead of using a prism. Your orthoptist and eye doctor will discuss the options with you and you can decide together on the best choice for you.

## Frequently asked questions

### Can I drive a car with double vision?

No, you cannot drive with double vision. You must stop driving immediately and tell the DVLA if you have double vision.

After the DVLA has reviewed your case, you may be able to return to driving if your double vision is well controlled (for example, with a prism or a patch).

Even if your double vision is controlled with a prism, you must tell the DVLA that you are having this treatment and wait for their approval before driving again.

To contact the DVLA, visit: [www.gov.uk/contact-the-dvla/y/driving-and-medical-issues](http://www.gov.uk/contact-the-dvla/y/driving-and-medical-issues)

## Contact us

If you have any questions or concerns, please contact us.

Orthoptic department

Telephone: **023 8120 4789** (Monday to Friday, 8.30am to 5pm)

## Useful links

[www.squintclinic.com](http://www.squintclinic.com)

[www.uhs.nhs.uk/Media/UHS-website-2019/Patientinformation/Eyes/Squint-in-adults-1779-PIL.pdf](http://www.uhs.nhs.uk/Media/UHS-website-2019/Patientinformation/Eyes/Squint-in-adults-1779-PIL.pdf)

[www.nhs.uk/conditions/double-vision](http://www.nhs.uk/conditions/double-vision)

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